Activity Group Capital Investment Summary Component: Defense Information Systems Agency Activity group: Communications Information Services Activity Date: June 2001 (\$\sin \text{Millions})

		FY	2000	FY	2001	FY 2002		
Line Number	Item Description	Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost	
1	Equipment Replacement Productivity New Mission Environmental Compliance							
2	ADPE & Telecomm							
2.a 2.a.1	Computer Hardware (Production) Relational Database Management System	1	.500	1	.235	1	.135	
2.a.2	Document Management and Workflow Expansion	1	.280					
2.a.3	Integrated Multimedia Capability	1	.585	1	.555	1	.555	
2.b 2.b.1 2.b.2 2.b.3	Telecommunications Equipment Satellite Terminals Indefeasible Right of Use ATM Work Group Switch Equipment			1	1.600	1 1	20.000 12.638	
3	Software Development / Modernization							
3.a.1	Relational Database Management System (Internal)	1	2.045	1	1.790	1	1.217	
3.a.2	Document Management and Workflow Expansion (Internal)	1	.630	1	.280			
4	Minor Construction							
Total	 	5	4.040	5	4.460	5	34.545	

Exhibit Fund 9-a Activity group Capital Investment Summary

ACTIVITY GROUP CAPITAL INVESTMENT JUSTIFICATION (\$ in Millions)

B. DISA/CISA/June 2001

C. 2.a.1 Relational Database Management System

D. DITCO

		FY 2000			FY 2001			FY 2002	
Element of Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Relational Database Management System	1	0.500	0.500	1	0.235	0.235	1	.135	.135
Total	1	0.500	0.500	1	0.235	0.235	1	.135	.135

Narrative Justification:

Relational Database Management System (RDBMS): Background: This initiative is to convert the existing DITCO application systems to relational database management systems in order to provide system modernization and improve customer satisfaction with DITCO services. These existing systems provide primarily unique telecommunication processing to support DITCO's ordering, procurement, customer bill calculation, and financial processing along with a few minor support systems. The systems that encompass this processing environment are: Contractual On-line Procurement System (COPS), Financial Accounting and Budgeting System (FABS), Rates and Tariff File System (RTFS), Financial Accounting Management Information System (FAMIS), TR/TSO Front-End to CSS and Performance Asset Management System (PAM). This Capital Investment Project titled as the Telecom RDBMS Contractual Procurement and Financial Processing combines COPS and FABS into the current funded RDBMS Capital Investment Project. P2K and F2K requirements are being worked by the RDBMS project.

Benefits: Saves on redundant data entry. The implementation of upgraded relational applications will place DITCO in a strategic state-of-the-art position to take advantage of newer technologies and greatly improve access to information. Permits better support to the computer users, to DITCO customers and improve its overall mission. Reducing use of the mainframe will save on DECC bill.

ACTIVITY GROUP CAPITAL INVESTMENT JUSTIFICATION (\$ in Millions)

B. DISA/CISA/June 2001 C. 2.a.3 Integrated Multimedia Capability

D. DITCO

		FY 2000		FY 2001				FY 2002	
Element of Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Integrated Multimedia Capability	1	0.585	0.585	1.000	0.555	0.555	1	.555	.555
Total	1	0.585	0.585	1	0.555	0.555	1	.555	.555

Narrative Justification:

Integrated Multimedia Capability: With the evolution of computers and the work environment comes the need to merge the telephone and the computer into a single entity capable of processing voice and video transmissions as well as meeting traditional multimedia requirements. This initiative requests funds to integrate the functions of voice, video and data at a workstation meeting traditional data and multimedia requirements. We are proposing accomplishing this through the acquisition of hardware and software. The foundation of this effort is to integrate all sources of voice, video, and data through a cost effective interface to a workstation capable of supporting the demands placed upon it. There are two sources for this type of data to enter DITCO. First, the non-classified internet protocol network (NIPRNET). Second, the Northern Telecom Meridian 1 private branch exchange (PBX) located at DITCO. The next steps include upgrading the current network to increase bandwidth to the workstation and new workstations that can handle the new capability.

ACTIVITY GROUP CAPITAL INVESTMENT JUSTIFICATION (\$ in Millions) B. DISA/CISA/June 2001 C. 2.b.1 TRN-E Triband Satellite Terminals D. CISA FY 2000 FY 2001 FY 2002 **Unit Cost Total Cost** Quantity **Unit Cost Total Cost Quantity Unit Cost Total Cost** Element of Cost Quantity Telecommunications Equipment 1.000 1.600 1.600 0.000 0.000 1.600 1.600 .000 .000

Narrative Justification:

Total

Replacement of existing Navy-owned VSAT Terminal in Souda Bay, Crete. The current terminal supports only one E-1 (2.048Mbs) of data. Increased bandwidth required by existing users and new requirements for additional T-1s (1.544Mbs) cannot be supported with the the currently available bandwidth. The new terminal will expand the bandwidth to 12 MBS. It will also support multiple up and down converters allowing it to shoot to several different locations at the same time. This multiple capability enables the terminal to route the traffic out of Souda Bay to a terminal closer to the end user by having multiple smaller connections between them. This will reduce the bandwidth currently required to back haul circuits from the UK to Germany and Italy due to a lack of terminals in these countries.

ACTIVITY GROUP CAPITAL INVESTMENT JUSTIFICATION (\$ in Millions) B. DISA/CISA/June 2001 C. 2.b.2 Indefeasible Right of Use (IRU) D. CISA FY 2000 FY 2001 FY 2002 Element of Cost Quantity **Unit Cost Total Cost** Quantity **Unit Cost Total Cost** Quantity **Unit Cost Total Cost** Telecommunications Equipment 20.000 20.000

Narrative Justification:

Total

Cost is for Indefeasible Right of Use (IRU) for an under seas fiber optic cable pair, maintenance on the terminal equipment and its SONET restoral path.

0.000

Replacement of existing commercial leased bandwidth between CONUS and Europe with an IRU purchase. TRN-E currently can only lease bandwidth on overseas cable systems which costs DISA a large recurring cost each month. Our requirements only increase in size so we constantly have to lease additional bandwidth. With the purchase of an IRU for a fiber optic cable pair, the initial up front costs (approximately \$20M) would reduce the overall life cycle costs and five us access to unlimited bandwidth, limited only by technology increases in wave division multiplexing. A fiber optic pair currently has the capability of providing bandwidth to OC192. This bandwidth can be upgraded/increased as the wave division technologhy improves. Estimated savings to DOD are \$10.9M over a twenty year fiber cable's lifetime use.

0.000

0.000

0.000

20.000

20.000

ACTIVITY GROUP CAPITAL INVESTMENT JUSTIFICATION (\$ in Millions)

B. DISA/CISA/June 2001 C. 2.b.3 ATM Work Group Switch Equipment. D. CISA

		FY 2000 FY 2001					FY 2002		
Element of Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Telecommunications Equipment ATM Work Group Switch Equipment							1	12.638	12.638
Total	-	0.000	0.000				1	12.638	12.638

Narrative Justification:

This equipment is needed to support an increased workload and mission that cannot be adequately accomplished with the existing ATM Work Group Switch equipment. There are three types of Equipment and associated installation included in this line. Terabit Switch/Router equipment provides for the implementation of Multiprotocol Label Switching (MPLS) and the convergence of layer two switching (data link layer) and layer three routing (network layer) in the DISN Core with scalable carrier-class platforms of high reliability and availability necessary to support increased user traffic and quality of service. ATM Enterprise Switch equipment provides ATM Enterprise Network Switches with sufficient capacity, port density, and reliability necessary in the edge backbone network that cannot be adequately accomplished with existing ATM Work Group Switches. ATM Standard Delivery Node provides for the implementation of ATM Standard Service delivery Node equipment and installation (i.e TNX1100 (10 GBPS.) Redundant Switch with timing and synchronization modules and legacy data interworking function (IWP) devices).

ACTIVITY GROUP CAPITAL INVESTMENT JUSTIFICATION (\$ in Millions)

B. DISA/CISA/June 2001 C. 3.a.1 Relational Database Management System D. DITCO

		FY 2000			FY 2001			FY 2002	
Element of Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Relational Database Management System	1	2.045	2.045	1	1.790	1.790	1	1.217	1.217
Total	1	2.045	2.045	1	1.790	1.790	1	1.217	1.217

Narrative Justification:

Relational Database Management System (RDBMS): Background: This initiative is to convert the existing DITCO application systems to relational database management systems in order to provide system modernization and improve customer satisfaction with DITCO services. These existing systems provide primarily unique telecommunication processing to support DITCO's ordering, procurement, customer bill calculation, and financial processing along with a few minor support systems. The systems that encompass this processing environment are: Contractual On-line Procurement System (COPS), Financial Accounting and Budgeting System (FABS), Rates and Tariff File System (RTFS), Financial Accounting Management Information System (FAMIS), TR/TSO Front-End to CSS and Performance Asset Management System (PAM). This Capital Investment Project titled as the Telecom RDBMS Contractual Procurement and Financial Processing combines COPS and FABS into the current funded RDBMS Capital Investment Project. P2K and F2K requirements are being worked by the RDBMS project.

Benefits: Saves on redundant data entry. The implementation of upgraded relational applications will place DITCO in a strategic state-of-the-art position to take advantage of newer technologies and greatly improve access to information. Permits better support to the computer users, to DITCO customers and improve its overall mission. Reducing use of the mainframe will save on DECC bill.

ACTIVITY GROUP CAPITAL INVESTMENT JUSTIFICATION (\$ in Millions)

B. DISA/CISA/June 2001 C. 3.a.2 Document Management and Workflow System Expansion

D. DITCO

		FY 2000			FY 2001			FY 2002	
Element of Cost	Quantity	Unit Cost	Total Cost	Quantity		Total Cost	Quantity	Unit Cost	Total Cost
Document Management and Workflow System Expansion	1	0.910	0.910	1.000	0.280	0.280		.000	.000
Total	1	0.910	0.910	1	0.280	0.280	-	.000	.000

Narrative Justification:

Document Management and Workflow System Expansion: Background: DMWS began in FY97 in an effort to replace the closed network, Wang-based DITCO Integrated Imaging System (DIIS). DITCO has been conducting a paperless workgroup for the past 18 months to examine and revise its processes in order to transition to a paperless environment. Electronic Document Management System (EDMS) has an electronic filing cabinet with workflow and records management capability. Requested capital asset funds were approved for use in May 1998. DITCO proceeded to develop the second phase of EDMS. DITCO's contractor, World Wide Technologies, has developed the application for the Computer Technology (CT) electronic contract folders which was fielded in July 1999. The remaining electronic folders for Telecom IQO contracts are in place but awaiting finalization of procedures to go operational, estimated completion date is October 2000. This initiative (EDMI - FY00-01) requests funds to fully integrate EDMS with other DoD and DISA electronic applications which will substantially eliminate paper in the acquisition process.

Benefits: These electronic contract files are able to be managed in the same way that the paper contract files are managed. Time, money and storage space is saved by not having to print and store the paper contract folders. There is more security and audit trail functionality than with paper files. More than one person can access a contract folder at a time. Eliminates lost or misplaced contract files which can occur in paper contract folders. Eliminates the need to provide printed documents to multiple users for their review.

Capital Budget Execution Component: Defense Information System Agency Activity group: Communication Information Services Activity (\$ in Millions)

Projects in the FY01 Amended President's Budget

<u>FY</u>	Approved Project	BES FY2000	Reprogs	Approved Proj Cost	Current Proj Cost	Asset/ Deficiency	Explanation
2001	Equipment- New Mission Satellite Terminal	1.600	.000	1.600	1.600	.000	
	Equipment- Productivity Integrated Multimedia Capability	0.555	.000	0.555	0.555	.000	
	ADPE and TELECOM Telephone Switch Upgrade	.000	.000	.000	.000	.000	
	Software Development Contract Entry System (CES) Decision Support Capability Document Management and Workflow System Expansion Relational Database Management Systems	.000 .000 .280 2.025	.000 .000 .000	.000 .000 .280 2.025	.000 .000 .280 2.025	.000 .000 .000	
	Total FY 2001	4.460	.000	4.460	4.460	0.000	

Exhibit Fund 9d Capital Budget Execution

Activity Group Capital Investment Summary

Component: Defense Information Systems Agency Activity Group: Information Services (Defense Computing)

Date: June, 2001

(\$ in Millions)

Line	,	2000	2001	2002
<u>Number</u>	ITEM DESCRIPTION	Total Cost	Total Cost	Total Cost
1	DMC Consolidation/ Regionalization (SMART)	2.000		
2	Facilities Support	4.477	3.300	6.390
3	Communications		0.328	
4	Enterprise System Management	0.977		
5	Mid-Tier Investment/Storage	13.535	0.726	40.244
6	MVS CPU Investment		1.963	16.500
7	MVS Storage	2.601	9.083	9.366
8	Executive Software Standard Operating Environment	1.715	5.100	5.100
	TOTAL ALL	25.305	20.500	77.600

ACTIVITY GROUP CAPITAL INVESTMENT JUSTIFICATION A. FY 02 Amended Budget Submission (\$ in Thousands) C. Line No. & Item Description: D. DISA WESTHEM B.Component: DISA Activity group: Defense Computing 1 - DMC Consolidation/Regionalization (SMART) June 2001 FY 2000 FY 2001 FY 2002 Unit Unit Unit Total Cost Qty Cost Total Cost Qty Cost Qty Cost Total Cost DMC Consolidation/ Regionalization (SMART) Mechanicsburg \$774 \$0 \$0 St. Louis \$1,226 TOTAL \$0 \$0 \$2,000

The Quadrennial Defense Review (QDR) 1997 stated that DISA WESTHEM should consolidate its sixteen Defense Megacenters' (DMCs) mainframe processing to six mainframe processing sites. The remaining DMCs will be streamlined to support mid-tier processing on a self-sufficient basis. This will continue the drive toward lower rates for the DISA customers. The SMART business plan has been published.

ACTIVITY GROUP CAPITAL INVESTMENT JUSTIFICATION A. FY 02 Amended Budget Submission (\$ in Thousands) C. Line No. & Item Description: D. DISA WESTHEM B.Component: DISA Activity group: Defense Computing 2 - Facilities Support June 2001 FY 2000 FY 2001 FY 2002 Unit Unit Unit Otv Cost Total Cost Qty Cost Total Cost Otv Cost Total Cost Facilities Support \$4,477 \$3,300 \$6,390 TOTAL \$6,390 \$4,477 \$3,300

The ongoing need for facilities support has been repeatedly recognized in Program Budget Decision 417. DISA has done an in-depth reviewof the DMC facilities and is taking proactive steps to ensure continued operations, with first priority given to the five mainframe sites. The DMCs continue to need mission critical facility equipment and systems that support their processing capability. Equipmentprocessing that has surpassed its practical life could fail at any time, resulting in cessation of computer operations until expensive emergency equipmentcould be acquired. Planned projects include mechanical controls, environmental, generators and enclosures, Uninterruptible Power SupplyUPS) upgrades and batteries, security access, chillers, boilers, roof repairs, electrical repair, fire suppression, raised floor, and other projects as needed.

ACTIVITY GROUP CA	APITAL IN (\$ in Thou			T JUSTIFIC	'ATI(ON	A. FY 02 Amended Budget Submission				
B.Component: DISA Activity group: Defense Computing June 2001		No. & Item Description:							D. DISA WESTHEM		
		FY 2000 FY		FY 2001			FY 2002				
			Unit			Unit			Unit		
		Qty	Cost	Total Cost	Qty	Cost	Total Cost	Qty	Cost	Total Cost	
Communications				\$0			\$328			\$0	
TOTAL				\$0			\$328			\$0	

In Fiscal Year 1999, there is a requirement to replace Front-End Processors (FEPs) which, while Y2K compliant, will have by FY99 outlived their life-cycle and become more costly to maintain each year. Both the hardware and software maintenance can be substantially decreased by replacement with newer technology such as routers with CIP cards, which take advantage of TCP/IP software already being supported on DISA's existing CPUs. Additional communication capability is needed to support the constantly growing traffic flow.For FY 2000, the capital initiatives planned by WESTHEM to improve their communications infrastructure are hot-spare Entrance Switches and Premise Routers, Ogden Sonet Upgrade, and Ogden Switch Upgrades. The installation of hot-spare Entrance Switches and Premise Routers in the current communications architecture of the six DMCs will remove two potential data communication single points of failure. The use of a secondary switch and router in a hot-spare configuration will allow for constant customer communication to the DMCs if maintenance or failure occurs on the primary switch or router of that DMC. The final two initiatives at Area Command Ogden are requirements to increase the communications capability of the site. They have reached the peak threshold of their current communications architecture, and need the SONET and Switch upgrades to improve current and prepare for future communications requirements.

ACTIVITY GROUP CAPITAL INVESTMENT JUSTIFICATION A. FY 02 Amended Budget Submission (\$ in Thousands) B.Component: DISA C. Line No. & Item Description: D. DISA WESTHEM Activity group: Defense Computing 4 - Enterprise System Management June 2001 FY 2000 FY 2001 FY 2002 Unit Unit Unit Total Cost Qty Cost Qty Cost Total Cost Qty Cost Total Cost Enterprise System Management \$0 \$0 Hardware \$977 Software \$0 TOTAL \$977 \$0 \$0

Hardware: DISA needs the ability to deliver enhanced service levels and service level reporting to their customers. There are needs to put in place an architecture and infrastructure that positions the organization for growth and integrations. The clustering architecture creates a single system image that can be managed, tuned, and monitored by the System Management Center (SMC), increase the reliability and availability by providing the capability to automatically move workload from one node to another with minimal disruption. The project will accommodate 3,600 users.

Software: Requirements are to build fully functional/integrated architecture for DISA sites. DISA will determine the appropriate number of System Management Centers (SMCs, logical and physical) reducing 15 physical SMCs into the number needed to support WESTHEM and DISA. In addition, WESTHEM will establish the architectural baseline required to move into a "Lights Dim" environment as directed by the Agency. The goal of this project is to integrate systems software products, automate manual processes, and deploy a systems management baseline, creating the necessary architecture to support Enterprise Systems Management. Technology refreshment of software components will be required to ensure interoperability and successful reduction in number of operational SMCs.

ACTIVITY GROUP CAPITA	MENT JUSTIFICATION A. FY 02 Amended Budg nds)						get Submission			
B.Component: DISA Activity group: Defense Computing June 2001	C. Line N 5 - Mid-T			escription: ent				D. DISA WESTHEM		
		FY 2000 FY 2001						FY 2002		
		Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
Mid-Tier Investment DWAS				\$13,535			\$726			\$40,244
TOTAL				\$13,535			\$726			\$40,244

This initiative provides investment in mid-tier computing infrastructure for continued support of existing and new customer requirements. DISA's mid-tier responsibility continues to expand; most new customer applications are being developed and deployed on mid-tier systems. Additional CPUs and software licensing will be needed to continue support of these new business opportunities as well as current operational workloads.

The technological life cycle (innovation / exploitation / obsolescence) for CPUs is commonly recognized to be 18 months. DISA currently owns a number of small scale mid-tier platforms that are no longer offered as new equipment. Our ability to support and maintain them is becoming a serious issue. Platform modernization is required in order to ensure reliable service.

Standardization and optimization of mid-tier systems will greatly improve DISA's operational environment. The newer technologies will provide increased capacity and improved scalability, thereby creating a more flexible, reliable and efficien operational environment. This in turn will allow DISA WestHem to be more responsive to customer needs and better utilize existing resources.

The Defense Working Capital Accounting System (DWAS) was fully deployed at the Defense Automated Printing Service in 1998. DWAS is the first commercial off-the-shelf DOD migratory accounting system and the first to fully implement the U.S. Government and some of the core servie software, but much remains to be done. This initiative provides for continued

	PITAL IN in Thousan							A. FY 02 Amended Budget Submission			
B.Component: DISA Activity group: Defense Computing June 2001		C. Line No. & Item Description: 6 - MVS CPU Investment						D. DISA WESTHEM			
		FY 2000			FY 2	001		FY 2002			
		Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	
MVS CPU Investment				\$0			\$1,963			\$16,500	
TOTAL				\$0			\$1,963			\$16,500	

This initiative replaces old M-Class mainframes with CMOS technology. The replacement will be done over a two-year period. This replacement will result in a cost-effective way of doing business due to the drop in cost per MIP and reduced maintenance and environmental costs. The replacements will be as follows: St. Louis and Mechanicsburg in year one (Fiscal Year 2001); and Columbus and Mechanicsburg in year two (Fiscal Year 2002).

ACTIVITY GROUP CAPITAL INVESTMENT JUSTIFICATION A. FY 02 Amended Budget Submission (\$ in Thousands) B.Component: DISA C. Line No. & Item Description: D. DISA WESTHEM Activity group: Defense Computing 7 - MVS Storage June 2001 FY 2000 FY 2001 FY 2002 Unit Unit Unit Total Cost Qty Cost Total Cost Qty Cost Otv Cost Total Cost MVS Storage \$2,601 \$9,083 \$9,366 TOTAL \$2,601 \$9.083 \$9,366

The goal of this Integrated Storage Solution Initiative for MVS workload, is to reduce storage costs for DISA's customers, optimize storage utilization across all storage media, replace media at the end of its life-cycle or when no longer serviceable, and improve and ensure reliability and availability of our customers' data. This is accomplished through the insertion of technology which streamlines operations by minimizing labor and human intervention, using compression to reduce space and cost, reducing environmental and maintenance costs, minimizing floor space used and its associated costs, and providing an environment that maintains frequently-accessed data on-line, while allocating less costly storage media for long-term archival or backup purposes. Across the enterprise, this initiative will also take advantage of economies of standardization.

ACTIVITY GROUP CAPITAL INVESTMENT JUSTIFICATION A. FY 02 Amended Budget Submission (\$ in Thousands) C. Line No. & Item Description: D. DISA WESTHEM B.Component: DISA 8 - Executive Software Standard Activity group: Defense Computing June 2001 Operating Environment FY 2000 FY 2002 FY 2001 Unit Unit Unit Qty Cost Total Cost Qty Cost Total Cost Otv Cost Total Cost **Executive Software Standard** Operating Environment \$5,100 \$1,715 \$5,100 TOTAL \$1,715 \$5,100 \$5,100

Standardization of the mainframe operating environment will provide for increased interoperability, more efficient workload leveling, better COOP capability, reduced cost, and improved productivity. Of paramount importance is that future rate reductions were predicated on reducing costs by standardizing products and eliminating functionally equivalent products. Progress has been made standardizing the base operating system and some of the core service software, but much remains to be done. This initiative provides for continued acquisition and implementation of standard executive software.

Capital Budget Execution Component: Defense Information Systems Agency Activity group: Defense Computing (\$ in Millions)

Projects in the FY 2001 Amended President's Budget

<u>FY</u>	Approved Project	PB <u>FY 2001</u>	Reprogs	Approved <u>Proj Cost</u>	Current Proj Cost	Asset/ <u>Deficiency</u>	Explanation
2001	Equipment Except ADPE and TELECOM	0.000	0.000	0.000	0.000	0.000	
2001	Equipment - ADPE and TELECOM						
	CPU/Other Hardware	7.800	0.000	1.963	1.963	0.000	
	Communications	0.000	0.000	0.328	0.328	0.000	
	Software	5.000	0.000	5.100	5.100	0.000	
	DASD	4.400	0.000	9.809	9.809	0.000	
	Enterprise System Mgmt	0.000	0.000	0.000	0.000	0.000	
	DMC Consolidation/Regionalization	0.000	0.000	0.000	0.000	0.000	
	Facilities/Security Requirements	3.300	0.000	3.300	3.300	0.000	
	Total FY	20.500	0.000	20.500	20.500	0.000	